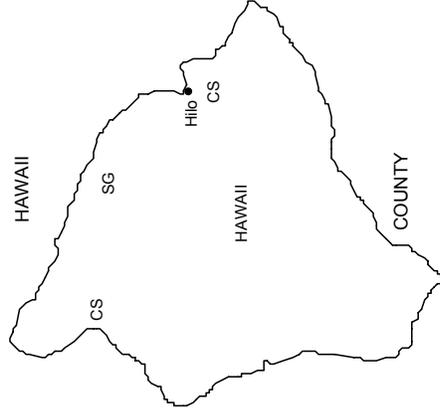
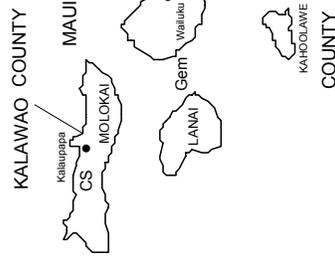
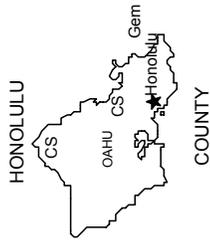
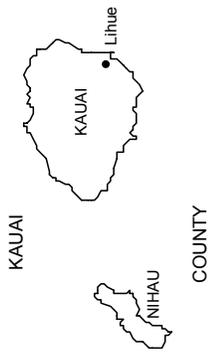


HAWAII



LEGEND

- ★ Capital
- City

MINERAL SYMBOLS (Major producing areas)

- CS Crushed stone
- D-L Dimension limestone
- Gem Gemstones
- SG Construction sand and gravel



THE MINERAL INDUSTRY OF HAWAII

In 2002, the estimated value¹ of nonfuel mineral production for Hawaii was about \$75 million, based upon preliminary U.S. Geological Survey (USGS) data. This was about a 12% decrease from that of 2001² and followed a 7% decrease from 2000 to 2001. Mining in Hawaii consisted mostly of the quarrying of stone to produce crushed stone and the extraction of sand and gravel from open pits, both for use by the construction industry. Gemstones also were produced, mostly black coral and precious coral. In 2002, crushed stone production was up with an increase in value of about \$5 million. Gemstones production, based on value, was up nearly 30% and construction sand and gravel production and related value was down slightly. The drop in cement value accounted for nearly all of the State's decrease in value (table 1).

In 2001, crushed stone production was up with an increase in value of nearly \$6 million. Gemstones production moderately decreased, and construction sand and gravel production and value were down slightly (table 1).

Hawaii's decrease in total nonfuel raw mineral production value in 2001 and 2002 resulted from the 2001 cessation of cement production in the State. In 2001, Hawaii Cement Co. decided to stop production at its plant on the island of Oahu, Honolulu County, and rely solely on imported cement. This operation, which produced cement from imported clinker, was the only cement plant in the State. The company stopped importing clinker in March and permanently closed its grinding plant in September (van Oss, 2003, p. 16.3). In 2001, in coordination with the shutdown, the company completed construction of its twin 30,000-metric-ton cement silos for storage of imported cement (Wurlitzer, 2001).

References Cited

van Oss, H.G., 2003, Cement, in *Metals and minerals: U.S. Geological Survey Minerals Yearbook 2001*, v. I, 16.1-16.31.
Wurlitzer, Dane, 2001, Hawaiian success: *International Cement Review*, March, p. 41-42.

¹The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the minerals or mineral products. Production may be measured by mine shipments, mineral commodity sales, or marketable production (including consumption by producers) as is applicable to the individual mineral commodity.

All 2002 USGS mineral production data published in this chapter are preliminary estimates as of July 2003 and are expected to change. Construction sand and gravel and crushed stone estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. Specialist contact information may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals/contacts/comdir.html>; alternatively, specialists' names and telephone numbers may be obtained by calling USGS information at (703) 648-4000 or by calling the USGS Earth Science Information Center at 1-888-ASK-USGS (275-8747). All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

²Values, percentage calculations, and rankings for 2001 may differ from the *Minerals Yearbook, Area Reports: Domestic 2001, Volume II*, owing to the revision of preliminary 2001 to final 2001 data. Data for 2002 are preliminary and are expected to change; related rankings may also change.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN HAWAII^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2000		2001		2002 ^P	
	Quantity	Value	Quantity	Value	Quantity	Value
Cement:						
Masonry	3	645 ^e	W	(3)	--	--
Portland	286	26,900 ^{e,r}	112	15,100 ^e	--	--
Gemstones	NA	(3)	NA	85	NA	109
Sand and gravel, construction	607	6,420	534	6,270	500	6,000
Stone, crushed	5,770	58,100	6,610	64,000	7,000	69,200
Total	XX	92,000	XX	85,500	XX	75,300

^eEstimated. ^PPreliminary. ^rRevised. NA Not available. W Withheld to avoid disclosing company proprietary data. XX Not applicable. -- Zero.

¹Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Value excluded to avoid disclosing company proprietary data.

TABLE 2
HAWAII: CRUSHED STONE SOLD OR USED, BY KIND¹

Kind	2000				2001			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	5	W	W	\$8.66	7	W	W	\$9.54
Traprock	16	5,010	\$51,300	10.24	12	5,690	\$55,400	9.75
Miscellaneous stone	2	W	W	9.17	2	W	W	9.27
Total or average	XX	5,770	58,100	10.08	XX	6,610	64,000	9.69

W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.

¹Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

TABLE 3
HAWAII: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2001, BY USE¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:			
Coarse aggregate (+1 1/2 inch):			
Filter stone	96	\$1,120	\$11.66
Other coarse aggregates	59	692	11.73
Total or average	155	1,810	11.68
Coarse aggregate, graded:			
Concrete aggregate, coarse	978	13,700	14.06
Bituminous aggregate, coarse	W	W	9.92
Other graded coarse aggregates	156	991	6.35
Total or average	1,130	14,700	13.00
Fine aggregate (-3/8 inch):			
Stone sand, concrete	W	W	16.62
Stone sand, bituminous mix or seal	W	W	9.92
Screening, undesignated	W	W	7.12
Other fine aggregates	762	9,630	12.64
Total or average	762	9,630	12.64
Coarse and fine aggregates:			
Graded road base or subbase	W	W	11.20
Crusher run or fill or waste	393	2,510	6.38
Other coarse and fine aggregates	658	6,610	10.04
Total or average	1,050	9,120	8.67
Agricultural limestone	(2)	(2)	18.08
Other miscellaneous uses and specified uses not listed	6	137	22.28
Unspecified, estimated ³	3,500	29,000	8.17
Grand total or average	6,610	64,000	9.69

W Withheld to avoid disclosing company proprietary data; included with "Other."

¹Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Withheld to avoid disclosing company proprietary data; included in "Grand total."

³Estimated production without a breakdown by end use.

TABLE 4
HAWAII: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2001, BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregates (including concrete sand) ²	167	W	W
Concrete products (blocks, bricks, pipe, decorative, etc.)	22	W	W
Asphaltic concrete aggregates and other bituminous mixtures	47	W	W
Road base and coverings	62	W	W
Fill	138	\$1,020	\$7.36
Other miscellaneous uses	13	211	16.23
Filtration	3	W	W
Unspecified, estimated ³	82	870	10.55
Total or average	534	6,270	11.74

W Withheld to avoid disclosing company proprietary data; included in "Total."

¹Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Includes plaster and gunite sands.

³Estimated production without a breakdown by end use.